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ABSTRACT

J. B. Rotter's internal-external scale has been widely used as a measure of the degree to which an individual believes he can control the outcome of events. When a revised form of the Rotter scale was subjected to factor analysis, with Rotter's 29 forced-choice items presented as 58 statements to be evaluated along semantic differential scales, the data revealed three factors which account for 21 percent of the explained variance: belief in the existence of luck, belief in internal-external control over personal events, and belief in internal-external control over societal events. An additional 17 factors emerged from the analysis. The revised form adds greater sensitivity to the internal-external scale. (EE)

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A FACTOR ANALYTIC STUDY OF A REVISED FORM OF ROTTER'S INTERNAL-EXTERNAL SCALE

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The ability of the communicator to move people to action is influenced, in part, by people's perception of their ability to shape the outcome of a situation. If an individual feels that his actions can influence the course of events he can be moved to action. If, however, he believes that his actions are of no consequence, an attempt to persuade him to act will be more difficult. This line of reasoning is consistent with Rotter's (1966) findings that success in certain learning tasks tend to be consistently perceived as being the result of individual effort and skill while success on other tasks are seen as the result of outside forces. Not only are task differences noted, but equally important is the finding that individuals differ in how they view the same task. These differences in perception have been found to influence behavior in a variety of circumstances, including suggestability and conformity situations. Conceivably this internal-external variable would operate in a persuasive situation as well.

The mesure of an individual's belief in internal or external control used in the largest number of studies of this variable has been a 29 item forced-choice scale developed by Rotter (1966). This scale asks subjects to choose between two statements such as:

2. a. Many of the unhappy things in people's lives are partly due to bad luck.

   b. People's misfortunes result from the mistakes they make.

An individual's score is determined by summing the number of underlined items. A copy of Rotter's scale is included in Appendix A. With the six filler items excluded the range of possible scores is 0 - 23; the higher the score the more the person believes in external control or reinforcement.

While the median is usually used to separate subjects into internal and external sets of a sample population the mean score of 1180 Ohio State Elementary Psychology students was 8.29. Tabulated in this fashion the score produced is clearly the result of an additive model. Each item is seen as contributing to the measurement of an individual's perception of internal or external control of reinforcement. Moreover, each item is seen as contributing an amount equivalent to the amount other items contribute.

The test for this additive model can be made via factor analysis. One general factor that accounts for a large degree of the scale variance should be uncovered; other factors should include few items and not explain much of the remaining variance. Further, all items of the scale should load approximately at the same level on the general factor. Two factor analytic tests of the scale are reported by Rotter and are supportive of his single factor notion of the I-E scale. As a result of one such study Rotter (1966, p. 16) reports that "much of the variance was included in a general factor. Several additional factors involved only a few items, and only a small degree of variance for each factor could be isolated." In the report of the second study (Franklin, 1963) Rotter reports that "All of the items loaded significantly on the general factor which accounted for 53% of the total scale variance. Not noted by Rotter, but mentioned in Franklin's abstract (1964) is the fact that seven additional factors were found. While his dissertation has been unavailable to me his labels for the factors, "socio-political situation, general situation,

efficacy of action, nonpersonal referent, specific situation and personal referent," did not suggest the precision of measurement I was seeking.

My own examination of the items that make up the I-E scale suggested that while one factor was perhaps dominant, the precise identification of other factors would also be possible. It appeared that certain items, such as 15 and 16, measured a belief in the operation of "luck," other items, such as 13 and 28, measured a belief in one's ability to control his own destiny, while still other items, such as 3 and 22, measured a belief in the ability of individuals to affect societal events. However crude my classification by observation method may seem, the fact that Rotter uses a forced-choice instrument makes any analysis of the factor structure less precise than it might otherwise be. For example, item 13a seems to deal with an individual's ability to control <u>his own</u> destiny while item 13b seems to deal with the ability of people in general to control <u>their</u> destiny. When forced to choose between these two items, subjects may be choosing between two separate domains of the factor structure.

The importance of the precise identification of the secondary factors is obvious when one considers that if, in fact, several factors contribute to the I-E score, then two individuals may have the same total scores but different subscores. Thus one person may believe that he controls his own life but not political events while another might feel no control over his own life but feel that individuals in general control political events. Persuasive attempts on these two individuals should have differential effects depending on the nature of the topic.

The present study was designed to further investigate the factor structure of the items contained in the Rotter I-E scale. The ultimate goal is to determine the several factors of internality that would operate in different persuasive settings. To further this end the present study sought to investigate the factor structure that would result when the 29 forced-choice items were separated and subjects were allowed to indicate a degree of response to each of the resultant 58 items.

Method

The 29 forced-choice pairs of the Rotter scale were separated so that 58 items resulted. These items were randomly ordered and each statement was placed over a seven place semantic differential scale bounded by the adjectival phrases strongly agree - strongly disagree. The protocol was introduced by a cover sheet that asked for biographical information and allowed for the presentation of instructions. The study was introduced as being designed "to find out the way in which certain important events in our society affect different people. You are asked to indicate the extent to which each statement in the questionnaire reflects your beliefs." Appendix B contains a copy of this form.

The protocols were completed by 212 students enrolled in introductory Communications classes at Iona College and at Mercy College. The study was administered during class meetings. Following the administration subjects were debriefed and the relationship between the questions under investigation and the study of communication was explained.

Results

The subjects' responses were coded 1 - 7 along the semantic scale from strongly agree to strongly disagree. These responses were subjected to Principle Component Factor Analysis. Contrary to Rotter's findings no general factor emerged. The table of eigenvalue, Table 1, shows that the first factor, with an eigenvalue of 6.41 only accounted for 11.06% of the explained variance. The second factor, with an eigenvalue of 3.29, accounted for only 5.68% of the explained variance. The next four factors each have eigenvalues between 2.00 and 3.00. The first six factors together only account for 33.57% of the variance. The first nine factors, those that each account for at least 3% of the variance, together only account for 43.03% of the variance.

The disappearance of the general factor was a surprise. I suspected that by increasing the sensitivity of the instrument by obtaining a graduated response to the 58 items the secondary factors would more clearly emerge without effect on the first factor. Such was not the case. It appears that as the unique aspect of the 58 items emerged the general factor was lost. The observation that 20 factors have eigenvalues greater than 1.00 lends support to the proposition that each item or small groups of items are measuring a unique component of the belief structure and not a generalized belief in the internal or external control of reinforcement. These 20 factors together account for 67.5% of the explained variance.

To better understand the nature of these twenty factors they were subjected to Varimax Rotation.[1] This provides an orthoginal simplification

[1]The results of the Varimax Rotation are available from the author.

of the factor structure in terms of the factors present. These results lend graphic evidence to the lack of a single general factor. Using a cut off point of a .40 loading on a factor we note that only six items of the revised forms, 3,6,21,22,31, and 45 load heavily on the first factor. At the core of these items is a concern with the existence and viability of "luck." The second factor has only two items, 40 and 47 that load higher than .40 on the factor. These items, along with item 37 which loads .39 on the factor seem to share a concern with the reward which one can receive for his individual effort. The third factor has four items, 4, 17, 29 and 53 that load .40 or greater. If we exclude item 29 from the analysis it appears that the other three items deal with the amount of influence an individual can have on the actions of politicians. The reason item 29 relates to this factor is a bit ambiguous; perhaps one's experiences are seen as a result of the operation of politicians. It is curious to note that item 29 on the revised form is equivalent to item 8b on the original form. Item 8 on the original form is said to be a filler item!

The first nine factors, those that account for at least 3% of the explained variance are included in Table 2. This table reveals which items load heavily on these factors. Where it is appropriate a descriptive label has been provided for the factor. The examination of the items that loaded heavily on these first nine factors is illuminating in two interrelated ways. First to be noted is that in only two cases do items from Rotter's original scale load heavily on the same factor. The first instance is in the case of item 12 a & b. These are items 4 and 17 respectively on the revised form. Both items load on factor 3. Item 12a loads - .7624 on

the factor and item 12b loads .7662. This suggests that these items do in fact measure the same domain and further that they are at opposite ends of the scale from each other. The second instance of Rotter items loading on the same scale is in the case of items 14 a & b. These are items 26 and 18 on the revised scale. Both of these items load on factor 8, -.6536 and .79991 respectively. Thus these items are also at opposite ends of the same factor. Item 14 is however considered by Rotter to be a filler item and is not tabulated to produce the I-E score.

Related to the above is the observation that several other of Rotter's forced-choice items "a" load heavily on different factors from their pair "b." Table 3 reports the relationship between Rotter items, revised items and the factor loadings for those items that load on one of the first nine factors at the .40 level or greater. As can be noted, in five cases, 2, 4, 10, 21, and 25, the paired items appear to be measuring different aspects of the facture structure. Omitted from the table are pairs of items that do not both meet the .40 criterion level on any of the first nine factors. When all items are considered in terms of their heaviest loading on any of the 20 rotated factors there is only one additional pair, 28 a & b (36 and 24 on the revised form) that load more on the same factor, in this case 7, than on different factors. Of the 29 paired items in Rotter's original scale only items 7, 12 and 14 load strongest on the same factor. The other 26 items load strongest on different factors.

Discussion

The major findings of this study are that when the 58 items of Rotter's scale are examined along a scale that allows for a graduated response to in-

dividual items twenty separate factors emerge with eigenvalues greater than 1.00. None of these factors can be seen as a general factor that measures one's belief in internal or external control. Further, in most cases, the paired items in Rotter's scale do not measure the same factor.

This study sought to add more sensitivity to Rotter's instrument. With the original instrument subjects were forced to choose between non-mutually exclusive alternatives. A subject often was asked, as in the case of item 25 a $ b, whether he believed he could influence his life or whether luck existed. He could not indicate the extent to which he might believe both were true. The added sensitivity of the revised instrument may account for the disappearance of the general factor found with the original scale. The confounding of two items with different factor loadings into one forced-choice item may obviate the unique nature of the separate items. ALl that remains is a general factor. The revised form allows for the measurement of the unique nature of each item. A summation of the factor scores would then provide a general score if needed.

The first three factors that have emerged from the present study, (1) belief in the existence of luck, (2) reward for individual effort, and (3) individual influence over the actions of politicians, suggest avenues for future investigation. The items that load heavily on factor 2 appear to measure how much an individual feels a person's effort will be rewarded. A person who does in fact believe that individual effort will be rewarded ought to be easier to persuade to certain kinds of action. If this person also scores highly on factor 7, a belief that the individual can control his own life, then he should be highly persuadable if the situation calls for

individual effort and if the action to be taken is seen as the kind that will influence the individual personally. The person who scores low on these two dimensions would probably be less likely to take action under these circumstances. Circumstances such as this might exist when trying to convince someone that he should study more and pay attention in class.

The items that load heavily on factor 3 appear to measure how much the person feels that individuals can control the actions of politicians. It would appear that this is a measure of political cynicism. People who score high on this dimension, those who believe that individuals can control politicians, would be more likely to take an active role in public affairs. These people would probably be more likely to vote, to sign petitions, to boycott meat and the like. A person who scores high on factors 2, 7 and 3 might be inclined to take a leadership position in public matters.

Previously mentioned was the situation in which someone is seeking to convince an individual to work hard in school. The persuadees scores on factors 6 and 9 would probably be related to the outcome of the persuasive attempt. These two factors seem to measure one's belief in the fairness of teachers and the fairness of tests. One who believes that teachers and tests are fair and who also believes he can control his own destiny and that individual effort will be rewarded would seem to be the easiest to persuade to study. It occurs however that such an individual might not need persuasion. If he already holds these beliefs he would probably already be a hard worker. The question then is, how does one come to hold these beliefs? How do we convince an individual that hard

work will be rewarded, that teachers are fair and that one can control his own destiny. A wide variety of work is suggestive in this area. Based on your preference, you may choose either a cognitive model or a behaviorist model. Either should provide useful insight and testable hypotheses.

At this point I have discusses how scores on several of the obtained factors should influence both overt behavior (political activism) and predispositions to respond to various kinds of messages (persuasability). Factors 2, 3, 6, 7, and 9 have been discussed and predictions (speculations) have been made. I have omitted discussing factors 4, 5 and 8 since I am uncertain as to their usefulness in the present context. I have saved for last a consideration of the effects of scores on the first factor, a belief in luck.

I suspect that the effect of the luck factor will depend on a variety of situation variables. The person with a high score on this factor, a person who believes that luck exists, will probably take greater risks if the chances of success are good and/or if the prospect of failure is not disaster. However if the chances of success aren't good and/or if a failure would be disastrous then the person who believes luck exists would probably be more cautious. This effect on risk taking will probably interact with scores on factors 2 and 7. But beyond asking whether luck exists we also would need to know whether the individual in general and in this kind of situation considers himself to be lucky. A person who feels he is lucky would probably take greater risks than an individual who believes luck exists but that his luck is bad. The factoral loadings of scales do not separate the belief in the existence of luck from the belief that the indi-

vidual is lucky.

The key feature of this discussion is that it appears that the present refinement of the Rotter Internal-External scale will allow one to obtain meaningful subscores on the revised scale. These factor scores should independently and interactively predict various kinds of developmental, attitudinal and behavioral variables. Maximum utility for the revised scale will require that several items that do not load highly on any of the meaningful factors be dropped while other items be altered and/or added.

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Franklin, R.D. Youth's expectancies about internal versus external control of reinforcement related to N variables. Unpublished doctoral dissertation, Purdue University, 1963. Abstracted in Dissertation Abstracts, XXIV, 1964, p. 1684.

Rotter, J.B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, 80 (1, Whole No. 609).

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Table 1

PRINCIPAL COMPONENTS - FACTOR ANALYSIS 58 TESTS 20 FACTORS

	EIGENVALUE	O/O TRACE	CUM.O/O	EIGV RECIP
1	6.4127	11.0563	11.0563	0.15594
2	3.2927	5.6771	16.7334	0.30370
3	2.8907	4.9840	21.7174	0.34593
4	2.5329	4.3670	26.0845	0.39481
5	2.2077	3.8064	29.8909	0.45295
6	2.1317	3.6753	33.5662	0.46911
7	1.9471	3.3570	36.9233	0.51359
8	1.8013	3.1057	40.0289	0.55516
9	1.7434	3.0059	43.0348	0.57358
10	1.6507	2.8460	45.8808	0.60582
11	1.5474	2.6680	48.5488	0.64623
12	1.4282	2.4624	51.0112	0.70017
13	1.3965	2.4077	53.4189	0.71609
14	1.3810	2.3811	55.8000	0.72409
15	1.2660	2.1828	57.9828	0.78988
16	1.2255	2.1129	60.0957	0.81600
17	1.1313	1.9505	62.0462	0.88397
18	1.0930	1.8844	63.9306	0.91495
19	1.0730	1.8500	65.7806	0.93196
20	1.0086	1.7389	67.5195	0.99152

TABLE 2

Labels, Item Loading and Content for Factors Contributing 3% or More to Explained Variance

Factor & Label	Loading	Item No.	Content
I	.74	21	In my case getting what I want has little or nothing to do with luck.
Belief in Luck	.70	45	It is impossible for me to believe that chance or luck plays an important role in my life.
	.67	6	Becoming a success is a matter of hard work; luck has little or nothing to do with it.
	.55	31	Many of the unhappy things in people's lives are partly due to bad luck.
	.52	3	There is really no such thing as "luck."
	.49	22	Getting people to do the right thing depends on ability; luck has nothing to do with it.
II	.75	40	People who can't get others to like them don't understand how to get along with others.
Reward for Individual Effort	.44	47	Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
III	.77	4	This world is run by the few people in power, and there is not much the little guy can do about it.
Individual Effect on Politicians	.76	17	The average citizen can have an influence in government decisions.
	.62	53	It is difficult for people to have much control over the things politicians do in office.
	.41	29	It is one's experience in life which determines what he's like.
IV	.83	44	How many friends you have depends on how nich a person you are.
V	.74	23	People's misfortunes result from the mistakes they make.
	.71	5	It is usually best to cover up one's mistakes.
VI	.80	41	Many times exam questions tend to be so unrelated to course work that studying is really useless.
Fairness of Education	.58	42	The idea that teachers are unfair to students is nonsense.
	.55	2	Sometimes I can't understand how a teacher arrives at the grades he gives.

TABLE 2 (cont'd.)

VII	.75	24	Sometimes I feel that I don't have enough control over the direction my life is taking.
Generalized Individual Effect	.71	38	Many times I feel that I have little influence over the things that happen to me.
	.42	7	As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
	.40	12	In the long run people get the respect they deserve in this world.
VIII	.80	18	There is some good in everybody.
Goodness of People	.65	26	There are some people who are just no good.
	.58	15	In the long run the bad things that happen to us are balanced by the good ones.
IX	.67	32	In the case of the well-prepared student there is rarely if ever such a thing as an unfair test.

TABLE 3

The Relation Between Rotter Item, Revised Item and Factor Loading*

Rotter Item	Revised Item	Factor with Heaviest Loading
2a	31	1
2b	23	5
4a	12	7
4b	47	2
10a	32	9
10b	41	6
12a	4	3
12b	7	3
14a	26	8
14b	18	8
21a	15	8
21b	10	5
25a	38	7
25b	45	1

*Includes only items in which each of the Rotter Items load .40 or higher on one of the first nine factors.

APPENDIX A, the orignial Rotter I-E Scale, cannot be included in the reproduction of this document.

Appendix B

Revised I - E Scale

Date_____ College or University _____ Year in School _____ (Fr., Soph., etc.)

Course _____ Major _____

Section _____ Age _____ Soc. Sec. #_____

This is a questionnaire to find out the way in which certain important events in our society affect different people. You are asked to indicate the extent to which each statement in the questionnaire reflects your beliefs.

If you strongly agree that a statement reflects your beliefs, place an "X" in the space under the statement next to "strongly agree". For instance:

Strongly Disagree ___ ___ ___ ___ ___ ___ X Strongly Agree

If you strongly disagree that a statement reflects your beliefs, place an "X" in the space next to "strongly disagree". For instance:

Strongly Disagree X ___ ___ ___ ___ ___ ___ Strongly Agree

If you agree "quite a bit" or disagree "quite a bit" that the statement reflects your beliefs, place an "X" in the space second from the right or left, as appropriate. For instance:

Strongly Disagree ___ ___ ___ ___ ___ X ___ Strongly Agree

(or)

Strongly Disagree ___ X ___ ___ ___ ___ ___ Strongly Agree

If you agree "slightly" or disagree "slightly" that the statement reflects your beliefs, place an "X" in the space third from the right or left, as appropriate. For instance:

Strongly Disagree ___ ___ ___ ___ X ___ ___ Strongly Agree

(or)

Strongly Disagree ___ ___ X ___ ___ ___ ___ Strongly Agree

If you neither agree nor disagree that the statement reflects your beliefs, place an "X" in the center space. For instance:

Strongly Disagree ___ ___ ___ X ___ ___ ___ Strongly Agree

After you have finished, please look back over the test and make sure you have completed every item.

54. Children get into trouble because their parents punish them too much.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

55. A good leader expects people to decide for themselves what they should do.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

56. Most students don't realize the extent to which their grades are influenced by accidental happenings.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

57. Without the right breaks one cannot be an effective leader.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

58. The trouble with most children nowadays is that their parents are to easy with them.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

1. When I make plans, I am almost certain that I can make them work.
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

2. Sometimes I can't understand how a teacher arrives at the grades he gives.
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

3. There is really no such thing as "luck".
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

4. This world is run by the few people in power, and there is not much the little guy can do about it.
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

5. It is usually best to cover up one's mistakes.
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

6. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

7. As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

8. By taking an active part in political and social affairs the people can control world events.
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

9. I have often found that what is going to happen will happen.
   Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

10. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
    Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

11. In the long run the people are responsible for bad government on a national as well as local level.
    Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

12. In the long run people get the respect they deserve in this world.
    Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

13. One of the major reasons why we have wars is because people don't take enough interest in politics.
    Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

14. Getting a good job depends mainly on being in the right place at the right time.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

15. In the long run the bad things that happen to us are balanced by the good ones.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

16. Many times we might just as well decide what to do by flipping a coin.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

17. The average citizen can have an influence in government decisions.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

18. There is some good in everybody.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

19. Team sports are an excellent way to build character.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

20. Capable people who fail to become leaders have not taken advantage of their opportunities.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

21. In my case getting what I want has little or nothing to do with luck.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

22. Getting people to do the right thing depends on ability; luck has nothing to do with it.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

23. People's misfortunes result from the mistakes they make.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

24. Sometimes I feel that I don't have enough control over the direction my life is taking.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

25. A good leader makes it clear to everybody what their jobs are.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

26. There are some people who are just no good.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

27. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

28. There's not much use in trying too hard to please people; if they like you, they like you.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

29. It is one's experiences in life which determine what he's like.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

30. There is too much emphasis on athletics in high school.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

31. Many of the unhappy things in people's lives are partly due to bad luck.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

32. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

33. There is a direct connection between how hard I study and the grades I get.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

34. Who gets to be the boss often depends on who was luck enough to be in the right place first.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

35. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

36. What happens to me is my own doing.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

37. People are lonely because they don't try to be friendly.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

38. Many times I feel that I have little influence over the things that happen to me.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

39. With enough effort we can wipe out political corruption.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

40. People who can't get others to like them don't understand how to get along with others.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

41. Many times exam questions tend to be so unrelated to course work that studying is really useless.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

42. The idea that teachers are unfair to students is nonsense.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

43. Most people don't realize the extent to which their lives are controlled by accidental happenings.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

44. How many friends you have depends on how nice a person you are.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

45. It is impossible for me to believe that chance or luck plays an important role in my life.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

46. Heredity plays the major role in determing one's personality.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

47. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

48. Most of the time I can't understand why politicians behave the way they do.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

49. One should always be willing to admit mistakes.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

50. There will always be wars, no matter how hard people try to prevent them.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

51. It is hard to know whether or not a person really likes you.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

52. No matter how hard you try, some people just don't like you.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree

53. It is difficult for people to have much control over the things politicians do in office.
Strongly Disagree ___ ___ ___ ___ ___ ___ ___ Strongly Agree